AN OBJECTIVE ASSESSMENT OF ENVIRONMENTAL TOBACCO SMOKE (ETS) EXPOSURE IN 5-7 YEAR OLD CHILDREN.

T. Assadullahi, S. Clark, J.O. Warner.
University Department of Child Health, Southampton General Hospital, Southampton SO9 4XY

ETS has been associated with increased frequency of raised IgE and eczema in infancy, but this has not been quantitated accurately by measuring levels of exposure and correlating them with the frequency and severity of the conditions. Exposure to ETS is measured using cotinine, the major metabolite of nicotine which has a half life of 20 hours and is widely considered the analyte of choice. We have developed a sensitive assay of cotinine using high performance liquid chromatography (HPLC) to quantitate ETC exposure in a group of 5-7 year old asthmatic children compared to a group of age matched controls. We chose to use mixed unstimulated saliva collected by absorbtion into dental rolls in the mouth for 5 minutes. Our modified extraction procedure was highly reproducible with a 96% retrieval rate of cotinine from spiked saliva. The parents were asked to fill in a questionnaire on atmospheric pollutants to obtain an estimate of declared ETS exposure in the home. Results showed 31% of the asthmatic patients according to the parents were exposed to ETS but by HPLC 68% had been so exposed (n=19). From the control group the figures were 40% and 51% of patients respectively. Therefore an objective assessment is essential as ETS is more ubiquitous than is apparent from questionnaire alone. Large studies are required to establish associations between ETS exposure and atopic disease.

202422807Q

PROGNOSTIC FACTORS IN CHILDHOOD ASTHMA - A 10-YEAR FOLLOW-UP STUDY

R. Soferman, J. Greif, S. Kivity, M. Topilsky, Institute of Pulmonary and Allergic Diseases, Tel-Aviv Sourasky Medical Center, Israel.

92 adults aged 15-25 years, who had moderate-to-severe asthma during childhood, underwent reevaluation of their clinical status and pulmonary function tests 10 years after diagnosis. Four classes of asthma severity were established. The factors predicting the outcome of childhood asthma were studied according to this classification. The following factors were not found to be statistically significant: age of onset ($p<0.07$), breast feeding ($p<0.09$), parental atopy ($p<0.7$, $p<0.4$), parental smoking habits ($p<0.7$, $p<0.2$), socioeconomic condition ($p<0.4$), treatment with D.S.C.G. ($p<0.08$), serum IgE level ($p<0.4$), routine skin tests and pulmonary function tests. Early treatment with beclomethasone for at least 2 years correlated significantly with improvement ($p<0.03$); being the eldest son and positive skin test to olive tree pollen correlated significantly with asthma deterioration ($p<0.05$, $p<0.05$).

202422807Q.A